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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/519,796

12/29/2004

Hiroshi Kojima

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EXAMINER

MATZEK, MATTHEW D

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

09/11/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/519,796	<b>Applicant(s)</b> KOJIMA, HIROSHI	
	<b>Examiner</b> MATTHEW D. MATZEK	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 6-10 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 6-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/2/2008 has been entered.

***Response to Amendment***

2. The amendment dated 7/2/2008 has been fully considered and entered into the Record. Claims 1 and 9 have been amended and contains no new matter. Claims 1, 3, 4 and 6-10 remain pending, but claims 9 and 10 have been withdrawn from consideration. Claims 1, 3, 4 and 6-8 remain active.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. (EP 0 998 182 A2) in view of Miyake (JP 62-107039). The disclosure of Ueda et al. is silent as to the use of a Cu-Co alloy for the blackened, shielding layer.

a. Ueda et al. disclose an electromagnetic shield plate comprising a transparent substrate [0011], a conductive grid [0024] of metal particles [0018] and a metallic layer [0032] of copper [0033]. The metallic layer structure may comprise multiple layers and the uppermost is preferably blackened to suppress the reflection of visible light. When covering the grid with a metallic layer structure said layer structure should be further

Art Unit: 1794

chromate plated. This provides the claimed density-intensifying layer formed on the blackened layer. Claim 1 now recites that the density-intensifying layer formed on the blackened layer intensifies the black density of the blackened layer. Ueda et al. disclose the use of chromate plating to form the outermost of layer of the multi-layer metallic layer [0033-34]. Applicant and the applied reference both use chromate treatments to form an outermost layer on top of the metallic layer and as such both processes would arrive at the same final product; the claimed density-intensifying layer formed on the blackened layer for intensifying black density of the blackened layer. The top of the electromagnetic shield plate may further comprise a transparent conductive film that covers the plate. Examiner equates the conductive film to the claimed transparent resin layer. The film that coats the plate may absorb near-infrared radiation and visible light [0043-48]. Ueda et al. fail to teach the specific composition of the blackened metal layer.

b. Miyake teaches the use of a Cu-Co alloy for use as an electromagnetic wave shielding material (claim 1) as a replacement for copper (working example).

c. Since Ueda et al. and Miyake are from the same field of endeavor (i.e. electromagnetic shielding materials), the purpose disclosed by the Miyake would have been recognized in the pertinent art of Ueda et al.

d. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have replaced the copper layer Ueda et al. with the alloy composition of Miyake. The skilled artisan would have been motivated by the desire to create an article that has superior corrosion resistance and high conductivity on a metal foil for an electromagnetic shield as set forth in Miyake.

Art Unit: 1794

- e. The transparent conductive film is formed over the conductive geometric pattern to cover the entire surface of the electromagnetic shield plate. This film layer serves to shield near-infrared radiation and provide surface resistance [0045]. The relative depth of transparent conductive film and number of layers are result-effective variables affecting the properties of the film [0045]. Consequently, absent a clear and convincing showing of unexpected results demonstrating the criticality of the depth of the resin layer, it would have been obvious to one of ordinary skill in the art to optimize this result-effective variable by routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).
4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. (EP 0 998 182 A2) and Miyake (JP 62-107039) as applied to claim 1 above, and further in view of Kadokura et al. (US 5,158,657). The disclosure of Ueda et al. and Miyake are silent as to the size of the particle for use in the blackened layer.
- a. Kadokura teaches the creation of a circuit substrate and process for its production comprising a conductive film layer **3** that is formed via electro-deposition. The conductive film layer is made conductive with a powder comprising Co and Cu with particle sizes preferably ranging from 0.05 to 1 micron (col. 5, lines 46-55).
- b. Since Ueda et al. and Kadokura are from the same field of endeavor (i.e. electromagnetic shielding materials), the purpose disclosed by Kadokura would have been recognized in the pertinent art of Ueda et al.
- c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have made the blackened layer of Ueda et al. with the particle

Art Unit: 1794

sizes taught by Kadokura. The skilled artisan would have been motivated to use particles of that specific size because smaller particles would cause secondary agglomeration and larger particles would cause a problem of sedimentation of particles (col. 5, lines 25-31).

***Response to Arguments***

5. Applicant's arguments filed 7/2/2008 have been fully considered but they are not persuasive.

6. Applicant argues that the claimed features of the chromated layer are not provided for in the applied references. Examiner agrees that the claimed functions of the chromated layer (density-intensifying and protection for the Cu-Co alloy particles) are not provided for in the applied references. Examiner, however, takes the position that since the combination of the applied references does provide for a layer of Cu-Co alloy particles covered by a chromate-plated layer, the claimed functions would be present as the claim limitations are rendered obvious by the applied references.

7. Applicant argues that based upon the teachings of Ueda et al. one of ordinary skill in the art at the time the invention was made would not have modified Ueda et al. to arrive at a density-intensifying layer formed on the blackened layer because the applied reference teaches the use of chromate plating to form the blackened layer, not for forming the upper layer of a separate density-intensifying layer as claimed. Ueda et al. disclose that the uppermost layer of the metallic structure may be chromate-plated forming the claimed density-intensifying layer. The metallic structure may consist of multiple layers [0032], such as copper, nickel, etc. In combining Ueda et al. and Miyake, Examiner has replaced the copper layer of Ueda et al. with

Art Unit: 1794

the Cu-Co alloy of Miyake, thereby providing a blackened layer that is then covered with the chromate layer.

8. Applicant argues that Kadokura fails to overcome the deficiencies of Ueda et al. and Miyake. As Applicant has correctly pointed out, Examiner has only relied upon Miyake to teach particle size for use in the blackened layer.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW D. MATZEK whose telephone number is (571)272-2423. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571.272.1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew D Matzek/  
Patent Examiner, Art Unit 1794